

## Veronica A. Alvarez Ph.D

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### CURRENT POSITION

2008– Tenure-Track Investigator and Acting Chief, Section on Neuronal Structure.  
Laboratory for Integrative Neuroscience, NIAAA, NIH. Bethesda, MD.

### EDUCATION

1997 Ph.D. awarded by School of Sciences, University of Buenos Aires, Argentina.  
1996 Neurobiology Course, Marine Biological Laboratories, Wood Whole, MA.  
1992 B.S./Masters degree in Biology, School of Science, University of Buenos Aires,  
Argentina

### PREVIOUS POSITIONS

2002–07 Postdoctoral Fellow at the laboratory of Bernardo L. Sabatini. Harvard Medical School, Department of Neurobiology. Boston, MA.  
Project: “Regulation of dendritic spine formation, growth and maturation”

1998–01 Postdoctoral Fellow at the laboratory of John T. Williams. Vollum Institute, Oregon Health and Sciences University. Portland, OR.  
Projects: “Role of electrotonic coupling on the activity of noradrenergic neurons from the locus coeruleus”, “Desensitization and internalization of  $\mu$ -opioid receptors”

1992–97 Graduate Research Fellow at the laboratory of Dr. Osvaldo D. Uchitel. School of Medicine, University of Buenos Aires, Argentina.  
Thesis: “Pharmacological properties and modulation of voltage-dependent calcium channels of central nervous system synaptic terminals”

1990–92 Undergraduate Research Fellow at the laboratory of Osvaldo D. Uchitel. School of Medicine, University of Buenos Aires, Argentina.  
Masters thesis: “Modulation of presynaptic currents at the neuromuscular junction: action of calcium channel agonist, antagonists, and immunoglobulins from LEMS patient”.

### AWARDS AND FELLOWSHIPS

2010 Young Investigator Poster Award, Winter Conference on Brain Research  
2006 *Goldenson* Research Fellowship, Harvard Medical School

- 2002–04 Training Grant Fellowship, NIH
- 1999–00 *Tartar Research Fellow*, Oregon Health and Science University
- 1996 *Phillip H. Presley* travel Award to Woods Hole Laboratories.
- 1992–96 National fellowship from the Council of Scientific and Technological Research (CONICET), Argentina.
- 1992 *Diploma of Honor*, University of Buenos Aires.
- 1991 *National fellowship* for undergraduate research from University of Buenos Aires.

## PUBLICATIONS

1. G. K. Seabold, J. B. Daunais, A. Rau, K. A. Grant, **V. A. Alvarez** (2010). DiOLISTIC Labeling of Neurons from Rodent and Non-human Primate Brain Slices. *JoVE. In press.*
2. J. L. Brigman, T. Wright, G. Talani, S. Prasad-Mulcare, S. Jinde, G. K. Seabold, P. Mathur, M. I. Davis, R. Bock, R. M. Gustin, R. J. Colbran, **V. A. Alvarez**, K. Nakazawa, E. Delpire, D. M. Lovinger and A. Holmes (2010). Loss of GluN2B-containing NMDA receptors in CA1 hippocampus and cortex impairs long-term depression, reduces dendritic spine density and disrupts learning. *J. Neurosci.* **30**: 4590–600.
3. **V. A. Alvarez**, D.A. Ridenour and B.L. Sabatini (2007). Distinct Structural and Ionotropic Roles of NMDA Receptors in Controlling Spine and Synapse Stability. *J. Neurosci.* **27**: 7365–76.
4. **V. A. Alvarez** and B. L. Sabatini (2007). Anatomical and physiological plasticity of dendritic spines. *Annu. Rev. Neurosci.* **30**: 79–97.
5. **V. A. Alvarez**, D.A. Ridenour and B.L. Sabatini (2006). Retraction of synapses and dendritic spines induced by off-target effects of RNA interference. *J. Neurosci.* **26**: 7820–5. Selected by TWIJ. *J. Neurosci.* 2006 26 : i.  
Faculty of 1000 “Must Read” list (<http://www.f1000biology.com/article/id/1033579/evaluation>).
6. S. F. Tavazoie\*, **V. A. Alvarez\***, D. A. Ridenour, D. J. Kwiatkowski, B. L. Sabatini (2005). Regulation of neuronal morphology and function by the tumor suppressors Tsc1 and Tsc2. *Nat. Neurosci.* **8**: 1727–34. \*, equal contribution.  
Faculty of 1000 “Recommended” list (<http://www.f1000biology.com/article/id/1029224/evaluation>).
7. **V. A. Alvarez**, C. Chow, E. J. Van Bockstaele and J. T. Williams (2002). Frequency-dependent synchronization of locus coeruleus neurons: role of electrotonic coupling. *Proc. Natl. Acad. Sci. U. S. A.* **99**: 4032–6.  
Faculty of 1000 “Recommended” list (<http://www.f1000biology.com/article/id/1005310/evaluation>).
8. **V. A. Alvarez\***, S. Arttamangkul\*, J. Whistler, M. van Zastrow, D. Grandy and J. T. Williams (2002).  $\mu$ -Opioid receptors: activation of potassium conductance, desensitization and internalization. *J. Neurosci.* **22**: 5769–76. \*, equal contribution.
9. **V. A. Alvarez**, S. Arttamangkul, and J. T. Williams (2001). A RAVE about Opioid Withdrawal. *Neuron* **32**: 761–3. *New and Views*.
10. **V. A. Alvarez** Maubecin, F. Garcia-Hernandez, J. T. Williams and E. Van Bockstaele (2000). Functional coupling between neurons and glia. *J. Neurosci.* **20**: 4091–8.

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11. S. Arttamangkul\*, **V. A. Alvarez** Maubecin\*, G. Thomas, J. T. Williams and D. K. Grandy (2000). Binding and internalization of novel fluorescent opioid peptides in living cells. *Mol. Pharmacol.* **58**: 1570–1580. \*, equal contribution.
  12. **V. A. Alvarez** Maubecin and J. T. Williams (1999). Developmental changes that regulate the activity of locus coeruleus neurons. *Tokai Journal of Experimental Clinical Medicine* **24**: 41–51. Review.
  13. **V. A. Alvarez** Maubecin, V. Sanchez, M. Rosato Siri, B. D. Cherksey, M. Sugimori, R. R. Llinas and O. D. Uchitel (1995). Pharmacological characterization of the voltage-dependent Ca<sup>2+</sup> channels present in synaptosomes from rat and chicken central nervous system. *J. Neurochem.* **64**: 2544–2551.
  14. O. D. Uchitel, F. S. Scornik, D. A. Protti, C. Fumberg, **V. A. Alvarez** and S. H. Appel (1992). Long term neuromuscular dysfunction produced by passive transfer of amyotrophic lateral sclerosis (ALS) immunoglobulins. *Neurology* **42**: 2175–2180.

#### Book Chapters

**V. A. Alvarez**, G. M. Shankar, B. L. Bloodgood, D. J. Selkoe and B. L. Sabatini (2007). Chapter 7: Multiple levels of synaptic regulation by NMDA-type glutamate receptor in normal and disease states. In “Synaptic Plasticity and the Mechanism of Alzheimer's Disease” Editors: Selkoe, Triller and Christen. Publisher: Springer

#### INVITED TALKS

- 1/2010 Bowles Center for Alcohol Studies, UNC, Chapel Hill, North Carolina
- 9/2009 IRSN- Argentinean Society for Neuroscience. Cordoba, Argentina
- 5/2009 Department of Behavioral Neuroscience, OHSU, Portland, Oregon
- 3/2009 Synapse : postsynaptic mechanisms of plasticity. Warrenton, Virginia
- 6/2008 NIEHS, North Carolina
- 8/2007 Tuberous Sclerosis Alliance Meeting, Annapolis, Maryland
- 4/2007 Gallo Institute, UCSF. San Francisco, California
- 5/2007 NIAAA-NIH, Bethesda, Maryland
- 3/2007 Department of Neurobiology, The University of Texas at Austin, Texas
- 3/2007 Department of Cell Biology and Neuroscience, University of California. Riverside, CA
- 2/2007 Department of Neurobiology, University of Pittsburgh, Pittsburgh, Pennsylvania
- 2/2007 Department of Biology, Washington University, St. Louise, MO
- 1/2007 Department of Biology, University of Pennsylvania. Philadelphia, Pennsylvania
- 12/2006 Gladstone Institute, UCSF. San Francisco, California
- 12/2006 Brudnick Neuropsychiatric Research Institute, U. Mass, Worcester, MA
- 12/2006 American Epilepsy Society, San Diego, California
- 7/2003 Vollum Institute, Oregon Health Sciences University, Portland, Oregon